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Addictions: A Need For Specific Education

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Abstract

The field of addiction has long been of prime medical concern due to its serious repercussions for health. The rates of mortality and morbidity deriving from maladaptive habits (especially tobacco and alcohol consumption) are of the utmost relevance to public health in developed countries, above all because they are preventable. It is therefore imperative for any person involved in the medical profession to be proficient in understanding, assessing and managing addiction. Unfortunately, attitudes and beliefs in the medical profession towards people engaged in drug abuse or with addictive behavioral patterns continue to be negative, or even intolerant. Clinical staff in primary care and hospitals commonly place alcoholics and drug addicts very low on the list of patients they would like to treat. This bias influences the approach to healing and, clearly, represents an obstacle to resolving the problem. Therefore, specific training in addiction for all medical personnel is essential if we are to change this stigmatizing and counter-therapeutic attitude. With these two goals in mind the University of Girona Medicine Faculty has designed an elective course on addictions (complementary to the core course on Psychiatry) which aims to incorporate both scientifically-grounded knowledge and a change in attitude towards people with addictive disorders into the Problem-Based Learning curriculum of undergraduate medical students. In this paper we describe the module’s structure, learning objectives, activities (lectures, workshops) and evaluation practices.

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1. Introduction

The consumption of alcohol, tobacco and illicit drugs have long been a matter of serious concern not only because these addictive substances are among the most dangerous threats to health in terms of mortality, morbidity, disability and poor quality of life, but also because of the extraordinary economic burden and cost they have on limited

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medical and social resources [1,2,3]. This concern is aggravated by the evidence that addictions are dysfunctional behaviors linked to unhealthy lifestyles and therefore modifiable factors susceptible to prevention and change [4, 5, 6, 7]. Given the scale of substance use problems, it is no surprise that all international health agencies and institutions address this situation as a priority public health area and call for the involvement of all health care providers and promoters [8, 9, 10].

The members of the health professions are particularly prominent agents in identifying and managing patients with substance use disorders but, regrettably, they have consistently displayed a non-acceptable prevalence of unfavourable and negative perceptions and dispositions towards such patients [11, 12, 13, 14, 15]. These negative perceptions are a reflection of social and cultural stereotypes commonplace among the general population [16, 17, 18, 19, 20], although specific deficits and biases in knowledge, skills and attitudes are also present in the medical profession itself [21]. Worryingly, prejudices and false beliefs among in health-care staff have strong iatrogenic effects because they hamper access to treatment and recovery for people suffering from an addiction [22, 23].

This unsatisfactory situation highlights the relevance of education on addiction for medical students, residents and practicing physicians and the need for obligatory standard curricular contents [24, 25,26].

From this perspective, we expound here an initiative carried out to train undergraduate medicine students in addiction management.

2. Inception of the course

The University of Girona Medicine Faculty initiated the degree in 2008 (meaning that students are now in their final academic year) and adopted Problem-Based Learning (PBL) methodology in its curriculum to focus on self-directed learning and the evaluation of not only medical knowledge and skills, but also students' learning and teamwork abilities, communication skills and sense of responsibility, that is, professional values and attitudes. From the very beginning there was a strong commitment to design an educational program that addressed key competences in addiction medicine. The strategy endorsed was to include cross-curricular learning objectives for all of the different subjects on the medical degree program (in Pharmacology, Family Medicine, Internal Medicine, Psychiatry, etc.) as well as to offer specific training in the form of an elective module.

3. The elective module

Intervention on Addictions is an elective module worth 5 course credits and spread over three weeks. The module comprises three PBL cases that introduce students to clinical situations in addiction practice. Each PBL case is studied for three sessions which are of two hours each. Participation in the sessions is mandatory. The module incorporates other optional academic activities (lectures, workshops). A faculty requirement for electives is that all academic activities must be carried out in English. All students can opt to do this elective, except for first years. Students are divided into groups of 11 members and there is no limit to the number of groups.

3.1. Objectives

The objectives are the learning outcomes from the course and specify the student competences that will be evaluated at the end of the program. The objectives of the Intervention on Addictions elective are:

1) To define addiction, dependence, habituation, abuse, harmful use and compulsion.
2) To characterize the social image of the addicted person and health professionals' attitudes towards drug consumption throughout history.
3) To present data regarding the prevalence of drug consumption for different substances in Catalonia, Spain, Europe and the rest of the world as well as percentage of people entering treatment for each drug.
4) To provide an account of mortality and burden of disease attributable to alcohol and other drugs.
5) To identify the major sociological and psychological factors associated with increased risk of addiction and explain evidence which indicates they are the most important determining factors.
6) To describe some of the different settings for addiction prevention and intervention with evidence of effectiveness for each setting. Specifically, to detail the strategy for addiction prevention is adopted by the sanitary services (Brief Intervention, Transtheoric Model of Change, Motivational Interviewing).
7) To recognize indicators for a behavior to have become an addiction.

8) To determine the neurocognitive processes involved in addiction.
9) To use examples to illustrate how an addiction is managed inside the Health care system.
10) To outline therapeutic interventions currently employed in the treatment of addictions (Pharmacological, Inpatient units, Cognitive-Behavioral Therapy, Group Therapy, Family Therapy, Therapeutic Community, Harm Reduction, etc.) and indicate their degree of effectiveness.
11) To use examples for assess, design and implement bio-psychosocial interventions for the treatment of patients with tobacco and alcohol addiction.
12) To evaluate the evidence for Complementary and Alternative treatments for addiction (Hypnosis, Acupuncture, Herbs and Plants, Bioresonance, etc.).

These objectives are broken down into detailed sub-objectives to facilitate comprehension of the learning goal. For instance, objective 6 is divided into: 6.1) Describe the components of a brief intervention, 6.2) Detail the stages and processes of change appropriated in each stage, 6.3) Define the five principles of motivational interviewing and give five strategies to implement them in a clinical session.

The objectives comprise the key competences proposed by experts as recommendations and guidelines in addiction education for physicians [24, 25, 26].

3.2. Scenarios

The scenarios are real-world clinical vignettes designed for the students to ponder. They are the starting point of a PBL process. The scenarios do not have a definite solution they only serve for students to select learning objectives to follow in the subsequent sessions and form the basis of their study plan. Three scenarios are introduced on the course, each divided into two parts. The first part is presented in the first PBL session and the second at the end of the second session. The aim of the second part of the scenario is to increase the complexity and understanding of the situation. An example of the first part of a scenario is:

Pablo, a 19 year-old first year student, is seeking medical attention for tiredness. He refers to some difficulties adapting to his new life far from his family, but does not mention any other serious personal or academic problems. He explains that he has been having symptoms of fatigue for the past few months, and is trying to alleviate them with vitamin supplements and legal stimulants (coke, coffee, and ginseng), but to no avail. During the medical interview, it becomes evident that Pablo's tiredness is due to a lack of sleep. He admits to spending many hours on the Internet every day, especially at weekends when he is alone in his shared flat. He recognizes that his sleep deprivation is creating some learning and concentration problems, but says that he cannot stop himself from surfing the Net.

The second part proceeds as follows:

Some months after his previous health consultation, Pablo seeks medical attention because of urethral discharge. During the medical examination, he admits that the time he spends surfing the Internet is totally devoted to looking for sexual partners, that his promiscuity is increasing (sometimes even three different partners in a few hours) and that he cannot stop his urge for quick sexual encounters because they give him strong libidinous gratification.

At the end of each third PBL session, the students are provided with a list of the objectives of the course covered by the scenario to compare with the objectives they themselves selected to work out.

3.3. Lectures

The lectures are speeches given by experts in the field and cover different objectives of the module. Two lectures are scheduled: 1) Neurocognitive grounds of addiction and 2) National strategies for addiction prevention and treatment. Although addiction has strong sociological and psychological determinants, the first lecture puts an emphasis on its neurocognitive bases in order to give students a medical understanding of its nature and remind them that it is a disorder under their responsibility. The second lecture reviews the image of the addict throughout history, describes the current Health Services network which was set up to meet the demands of patients, and the therapeutic policies implemented. The idea is to familiarize students with the treatment setting for addiction, its facilities and procedures. Students can download the slides and a document with questions highlighting the essential points of each lecture on the elective webpage.

3.4. Workshops

Workshops are exercises whereby students are divided into groups and each group analyzes and discusses a different clinical case. All groups must answer ten clinical questions focusing on treatment. In turn, each group presents its case to the class and justifies its therapeutic decisions while the rest of the class ask questions and evaluates. At the end of the round, a very short lecture is given by the professor to summarize current treatment strategies and after this short lecture the groups are requested to correct their clinical conclusions if necessary. The course offers two workshops: One on the clinical management of tobacco addiction and the other on the clinical management of alcohol addiction.

Below is an example of a clinical case:

Adriá is an unemployed 39 year-old referred to you by a social worker. He has never had a stable job although he has worked many odd ones. Now he lives with a sick woman (being treated for a psychiatric disorder) who receives a pension for her illness. Adriá has applied to receive pay as her caretaker. The social worker has validated Adriá's request, but during the interviews and meetings has become strongly suspicious of alcohol abuse. The social worker does not want to give the green light to Adriá's payment until his sobriety is guaranteed. In your office, Adriá has alcoholic breath but denies any alcohol consumption.

These are the ten clinical questions that each group must address in their clinical case:

1) Put a (metaphorical) title to the case.
2) Specify what other kind of extra information you need in order to prescribe your treatment (test, reports, etc.) and justify this.
3) Indicate what your therapeutic goals are. What would be your primary goal and secondary aims?
4) Point out what potential complications or shortcomings you foresee in your treatment and explain any possible sources of failure.
5) What kind of pharmacological intervention do you contemplate? Specify the prescription you are considering in this case. What are the expected outcomes of the medication you prescribe?
6) Do you intend to involve other persons in the treatment? Who? Why? How?
7) What would be the total duration of your treatment? What would be the frequency of your visits?
8) Do you consider implementing any special procedures in this case? Which ones? Why?
9) What special precautions do you consider are required in this case? What major risks should be avoided?
10) What special types of strengths, qualities, and positive conditions do the patient display that you consider might be incorporated into the treatment?

The purpose of the workshops is to serve students to practice tackling tobacco and alcohol problems taking into account the demands of the patient and the resources of the Spanish Health System.

3.5. Assessment

Two aspects of the course are assessed: participation in the PBL sessions (continuous assessment of different conducts: learning abilities, responsibility, communication and interpersonal relationships codified in a standardized questionnaire and appraised in each session) and a final written PBL exam. The exam is divided into two parts. In the first part, students are provided with two scenarios and must select four topics to discuss. Examinees must formulate explanatory hypotheses and give reasoned justification for them. For the second part of the exam, which takes place two days later, students choose two of the topics already selected in order to look for additional knowledge needed to corroborate their hypothesis. Several individualized questions are prepared previously and the student must provide satisfactory answers for them. Both assessment of the PBL sessions and the PBL written exam must be passed independently of one another. The assessment of the PBL session accounts for 60% of the final grade, and the PBL written exam accounts for the remaining 40%. Continuous assessment of the PBL sessions is a not recoverable activity and a fail in this part means not passing the course. Students failing the PBL written exam can resist in a second exam.

4. Limitations

Several limitations of the course have been detected: 1) the course is too short and it takes place between two demanding four-month periods, 2) considering it an elective implicitly suggests that addiction is not an essential subject. On the positive side, it can be interpreted that it is so important that, in addition to it being included as a core subject in psychiatry, it requires extra academic time, 3) a great heterogeneity of students exists (sophomores, juniors and seniors) with disparate clinical skills. Fortunately, working in groups can compensate for a diversity in expertise, 4) the requirement that all activities of the elective must be done in the English prevents the student's assistance to clinical settings, although students interested in attaining observational experience can arrange a stay in an addiction unit out of the elective terms. The possibility of doing patient simulations is under consideration.

5. Conclusions and future research

An elective course on addiction has been implemented at the University of Girona's Faculty Medicine to complement the content regarding addiction medicine disseminated on the degree with the goal of providing students with in-depth training in the field. Although student's rate the course very positively, a study is being undertaken to determine whether the aims of the program (to increase medical skills and change attitudes on the subject) are being met. New adjustments to the course may be necessary to overcome the limitations recognized so far.

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References

Effertz, T. & Mann, K. (2013). The burden and cost of disorders of the brain in Europe with the inclusion of harmful alcohol use and nicotine addiction. *European Neuropsychopharmacology*, 23, 742-748

World Health Organization (2009). Global Health Risks: mortality and burden of disease attributable to selected major risks. WHO. Library Cataloguing-in-Publication Data. www.who.int/healthinfo/global_burden_disease/GlobalHealthRisks_report_full.pdf (accessed 08-06- 13).

Rehm, J., Taylor, B. & Room, R. (2006). Global burden of disease from alcohol, illicit drugs and tobacco. *Drug and Alcohol Review*, 25, 503-513

Fachini, A., Aliane, P.P., Martinez, E.Z., Furtado, E.F. (2012). Efficacy of brief alcohol intervention for college students (BASICS): a meta-analysis of randomized controlled trials. *Substance Abuse Treatment, Prevention and Policy*. 7: 40

Jensen, C.D., Cushing, C.C., Aylward, B.S., Craig, J.T., Sorell, D.M., Steele, R.G. (2011) Effectiveness of motivational interviewing interventions for adolescent substance use behaviour change: a meta-analytic review, *Journal of consulting and Clinical Psychology*, Aug, 79 (4):433-40.

Kanner, E.F., Dickinson, H.O., Bever, F.R., Campbell, F., Schlesinger, C., Heather, N., Saunders, J.B., Burnand, B., Pienaar, E.D. (2007) Effectiveness of brief alcohol intervention in primary care populations. Cochrane Database of Systematic Reviews, Issue 2.

Ritter, A. & Cameron, J. (2006). A review of efficacy and effectiveness of harm reduction strategies for alcohol, tobacco and illegal drugs, *Drug and Alcohol Review*, 25, 611-624

Dua, T., Barbui, C., Clark, N., Fleischmann, A., Poznyak, V. (2011). Evidence-Based guidelines for Mental, Neurological and Substance Use Disorders in Low and Middle-Income Countries: Summary of WHO Recommendations. *PLoS Med*. 8(11).

Daar, A, Singer PA, Leah Persad D, Pramming, SK, Matthews DR.; Beaglehole R; Ganguly N, Glass, RI, Finegood DT, Koplan J, Nabel EG, Sarna G, Sarrafzadegan N, Smith R, Yach, D, Bell J (2007). Grand challenges in chronic non-communicable diseases. *Nature*, Volume 450, Issue 7169, pp 494-496.

Jamison, D. T & World Bank (2006). *Priorities in Health*. Washington D.C. World Bank.

Van Boekel, L.C., Brouwers, E.P.M., van Weeghel J., Garretsen, H.F.L. (2013). Stigma among health professionals towards patients with substance use disorders and its consequences for healthcare delivery: Systematic review. *Drug and Alcohol Dependence*, 131: 23-35.

Gilchrist, G. Moskalewicz, J., Slezakova, S., Okruhlica, L, Torrens, M.,Vajd, R., Baldacchino, A. (2011). Staff regard towards working with substance users: a European multi-centre study. *Addiction*, 106: 1114-11125.

Richmond I. C, Foster J. H. (2003). Negative attitudes towards people with co-morbid mental health and substance misuse problems: An investigation of mental health professionals. *Journal of Mental Health* 12 (4):393–403.

Fulton, R. (2001). The stigma of substance use and attitudes of professionals: A review of the literature. *Toronto, ON: Centre for Addiction and Mental Health*.

McLaughlin, D. & Long, A. (1996). An extended literature review of health professionals' perceptions of illicit drugs and their clients who use them. *Journal of Psychiatric and Mental Health Nursing*, 3, 283-288.

Lloyd, Ch. (2013). The stigmatization of problem drug users: A narrative literature review. *Drugs: education, prevention and policy*, 20 (2): 85-95.

Schomerus, G., Lucht, M., Holzinger, A., Matschinger, H., Carta, M.G., Angermeyer, M.C. (2011). The Stigma of Alcohol Dependence Compared with Other Mental Disorders: A Review of Population Studies. *Alcohol and Alcoholism*, vol. 46, Nº. 2, 105-112.

Corrigan, P. W., Kuwabara, S.A., O'Shaughnessy, J. (2009). The Public Stigma of Mental Illness and Drug Addiction: Findings from a Stratified Random Sample. *Journal of Social Work*, 9(2): 139-147.

Room, R. (2005) Stigma, social inequality and alcohol and drug use. *Drug and Alcohol Review*, 24, 143-155.

Fulton, R. (1999). The stigma of substance use: A review of the literature. A report submitted to the committee on stigma and addiction at the Centre for Addiction and Mental Health.

Miller, N.S., Sheppard, L.M., Colenda, C.C., & Magen, J. (2001). Why physicians are unprepared to treat patients who have alcohol-and drug-related disorders. *Academic Medicine*, 76, 410–418.

Luoma, J.B. (2010) Substance use stigma as a barrier to treatment and recovery. In Johnson, B.A. (ed.) *Addiction Medicine*. Springer.

Moss, R.H. (2005). Iatrogenic effects of psychosocial interventions for substance use disorders: prevalence, predictors, prevention. *Addiction*, 100, 595-604.

Wyatt, S.A. & Wilford, B.B. (2012). Medical Student and Physician Education in Substance Use Disorders in Verster, J.C., Brady, K.,Galanter, M, Conrod, P. (ed.) *Drug Abuse and Addiction in Medical Illness: Causes, Consequences and treatment*. Springer.

Polydorou, S., Gunderson, E.W., Levin, F.R. (2008). Training Physicians to Treat Substance Use Disorders. *Current Psychiatry Reports*; 10(5): 399-404.

Fiellin, D.A., Butler, R., D'Onofrio, G., Brown, R.L., O'Connor, P.G. (2002). The Physician's Role in Caring for Patients with Substance Use Disorders: Implications for Medical Education and Training in Haack, M.R. & Adger, H. (ed.) *Strategic Plan for Interdisciplinary Faculty Development: Arming the Nation's Health Professional Workforce for a New Approach to Substance UseDisorders*. Association for Medical Education and Research in Substance Abuse.